PENDING CLAIMS

1-5. (Cancelled)

6. (Original) A method of protecting non-mucosal tissue against damage from radiation therapy, the method comprising:

administering to a mammalian subject afflicted with cancer and treated with radiation therapy a composition comprising a therapeutically effective amount of glutamine or a pharmaceutically acceptable salt thereof, that protects the non-mucosal tissue against damage from the radiation therapy.

7. (Original) The method of claim 6 wherein the composition comprises carbohydrate in an amount effective to increase the absorption of glutamine by the subject.

8. (Original) The method of claim 6 or 7 wherein the composition allows the subject to be treated with a higher dose of radiation and/or treated with radiation for a longer time.

9. (Original) The method of claim 6 or 7 wherein the non-mucosal tissue is breast tissue or associated upper body tissue.

10. (Original) The method of claim 9 wherein the composition prevents increased breast density or lessens the severity of increased breast density.

11. (Original) The method of claim 6 or 7 wherein the composition prevents edema or lessens the severity of edema.

12. (Original) The method of claim 11 wherein the edema is of breast tissue.

13. (Original) The method of claim 6 or 7 wherein the non-mucosal tissue is skin.

14. (Original) The method of claim 6 or 7 wherein the composition protects the appearance of the non-mucosal tissue.

15-18. (Canceled).

19. (Withdrawn) A method of reducing or preventing pain arising from a non-mucosal tissue, the method comprising:

administering to a mammalian subject afflicted with cancer and treated with chemotherapy and/or radiation therapy a composition comprising a therapeutically effective amount of glutamine or a pharmaceutically acceptable salt thereof, that reduces or prevents pain in the non-mucosal tissue arising from the treatment.

20. (Withdrawn) The method of claim 19 wherein the composition comprises carbohydrate in an amount effective to increase the absorption of glutamine by the subject.

21. (Withdrawn) The method of claim 19 or 20 wherein the subject is treated with radiation therapy.

22. (Withdrawn) The method of claim 21 wherein the composition allows the subject to be treated with a higher dose of radiation and/or treated with radiation for a longer time.

23. (Withdrawn) The method of claim 19 or 20 wherein the subject is treated with chemotherapy and the composition allows the subject to be treated with a higher dose of a chemotherapeutic agent and/or treated with the chemotherapeutic agent for a longer time.

24. (Withdrawn) The method of claim 19 or 20 wherein the composition allows the reduction or elimination of the need for further pain control for the subject.

25. (Withdrawn) The method of claim 19 or 20, wherein the non-mucosal tissue is breast tissue.

26. (Withdrawn) The method of claim 19 or 20, wherein the non-mucosal tissue is skin.

27-43. (Canceled).

44. (Previously Presented) The method of claim 6, 7, 19, or 20, wherein the amount of glutamine administered is at least 0.5 mg per day per kg body mass of the subject.

45. (Original) The method of claim 44 wherein the amount of glutamine administered is 0.2 g to 3.0 g per day per kg body mass of the subject.

46. (Previously Presented) The method of claim 6, 7, 19, or 20, wherein the amount of glutamine administered to the subject is less than 0.5 g per kg per day.

47. (Previously Presented) The method of claim 6, 7, 19, or 20, wherein the amount of glutamine administered to the subject is less than 0.1 g per kg per day.

48. (Previously Presented) The method of claim 7 or 20, wherein the carbohydrate comprises one or more monosaccharides or disaccharides.

49. (Previously Presented) The method of claim 7 or 20, wherein the carbohydrate comprises a sugar alcohol.

50. (Previously Presented) The method of claim 7 or 20, wherein the weight ratio of total carbohydrate to glutamine in the composition is 0.5:1 to 50:1.

51. (Previously Presented) The method of claim 7 or 20, wherein the weight ratio of total carbohydrate to glutamine is at least 4:1 in an aqueous solution, either after preparation with an aqueous solvent or after delivery in an aqueous environment of the mammalian subject.

52. (Previously Presented) The method of claim 6, 7, 19, or 20, wherein the composition comprises no more than 5 naturally occurring amino acids other than glutamine.

53. (Original) The method of claim 52 wherein the composition comprises no naturally occurring amino acids other than glutamine.

54. (Previously Presented) The method of claim 6, 7, 19, or 20, wherein the composition is administered orally.

55. (Previously Presented) The method of claim 6, 7, 19, or 20, wherein the mammalian subject is a human.

56. (Previously Presented) The method of claim 6, 7, 19, or 20, wherein the composition is administered after or while administering radiation therapy to the subject.

57. (Previously Presented) The method of claim 19 or 20, wherein the composition is administered before administering radiation therapy to the subject.

58. (Previously Presented) The method of claim 19 or 20, wherein the composition is administered after or while administering chemotherapy to the subject.